ETHIOPIAN REGION BIRDS ATTRACTED TO THE LIGHTS OF NGULIA SAFARI LODGE, KENYA

G.C. Backhurst & D.J. Pearson

INTRODUCTION

Three accounts of the nocturnal migration of Palaearctic birds over Ngulia, Tsavo National Park (West) have demonstrated the role played by the powerful north-facing game-viewing lights in attracting large numbers of birds, especially during misty or rainy nights when the moon is small or below the horizon (Pearson & Backhurst 1976, Backhurst & Pearson 1977, Britton & Britton 1977). Pearson & Backhurst (1976) describe the site and the effects of the weather and moon on the numbers of birds grounded.

Ringing studies at Ngulia have continued from December 1969 until the present (December 1977) with most cover during the months of November and December. During this time over 20 000 Palaearctic birds have been ringed (and many times this number seen 'down', even on a single night), while Ethiopian region species have been remarkable for the comparatively minute numbers involved. However, during our visits between October and April a wide variety of Ethiopian species has been encountered at night or at dawn in circumstances suggestive of attraction to the lights during nocturnal movement. Such occurrences are listed below, species by species. Some well-recognized intra-African migrants (for example Didric Cuckoo *Chrysococcyx caprius* and Wattled Starling *Creatophora cinerea*) which occur at Ngulia are omitted since there is no evidence that the lights have influenced their arrival.

Observations were made during the hours of darkness (19.00 to 05.15 hrs) unless otherwise stated.

SPECIES ACCOUNTS

ARDEIDAE Sometimes during thick mist or rain species of heron are attracted to the lights: they often fly round calling for several hours before settling on the trees, buildings or ground. It is frequently impossible to identify these birds since often only vague shapes can be seen through the swirling mist.

ARDEOLA RALLOIDES Squacco Heron One watched eating a Whitethroat *Sylvia communis* on 27 November 1975, three circling in the mist and later settling on trees 5 December 1975 and a larger party seen the next night. These could perhaps have been Palaearctic birds for the species is not listed by Moreau (1966) as an Ethiopian migrant.

BUTORIDES STRIATUS Green-backed Heron Seen in the netting area just south of the Lodge at dawn on several dates in December 1975. Not recorded as a migrant by Moreau (1966) or Elgood *et al.* (1973).

EGRETTA ALBA Great White Egret Occasionally seen: one on 13 December 1973, twelve circling in the mist on 5 December 1976 finally landed in trees; a larger party was seen on the next night. Not a recorded migrant.

NYCTICORAX NYCTICORAX Night Heron A flock circled for 2 h on 26 December 1973, finally some landed in trees, others on the building and one was caught and ringed. These birds might have been Palaearctic (morphologically indistinguishable from Ethiopian birds); the movements of the African breeding population are unknown.

COTURNIX DELEGORGUEI Harlequin Quail The most numerous Ethiopian species, with records between early November and late January. Prone to entering the building at speed and often killed by hitting the walls. The numbers have fluctuated from year to year, most being recorded in 1972/73 and in 1976/77; in 1976/77 maximum numbers were recorded from 15-17 January. A well known migrant (Moreau 1966), some of which stay to breed in the Ngulia area in January to February.

GALLINULA ANGULATA Lesser Moorhen An adult caught in the Lodge at 04.00 hrs on 30 December 1972, and another seen in the netting area just south of the Lodge late on 12 January 1973 are our only records. Benson *et al.* (1971) and Elgood *et al.* (1973) both regard it as a migrant.

LIMNOCORAX FLAVIROSTRIS Black Crake One caught in the Lodge at 03.30 hrs 24 December 1976 is the sole record. Not recorded as a migrant but the fact that the species appears in newly-formed swampy places after rain demonstrates that it is subject to at least local movements.

TURNIX SYLVATICA Button Quail Nineteen have been caught or found dead in the Lodge at night between 6 November (1977) and 1 January (1974), one also occurred inside on the evening of 12 April 1977 (Britton & Britton 1977). Weights have ranged between 32 and 52 g, but this may be due to variation in size of males and females, females being larger, rather than to deposition of fat. Not recorded as a migrant by Benson *et al.* (1971) although Elgood *et al.* (1973) record one flying into a lighted room at night in Nigeria on 1 June.

OENA CAPENSIS Namaqua Dove An adult male caught in the Lodge on 17 December 1974, and another on 17 January 1977 are our only night records, although odd birds have been seen in the netting area occasionally. A known migrant in southern and west Africa although not mentioned by Moreau (1966).

STREPTOPELIA SENEGALENSIS Laughing Dove Often seen at night in the trees outside the Lodge and apparently arriving through the mist; eight have been caught between early November and mid-January in or near the building at night. This species is known to be abundant in certain areas and then to disappear for some months (Jackson 1938).

CLAMATOR JACOBINUS Black and White Cuckoo Recorded from early November to mid-January; sometimes seen and heard at night, when a few have been caught. Most captures have been made after dawn when as many as twenty have been present in the netting area. Both adults and juveniles have been caught, most undergoing a somewhat random wing-moult, although two adults on 8 December 1974 were immaculate, with fresh remiges. All the Black and White Cuckoos handled had white or buffish underparts; most were presumably moving south after breeding north of the equator, but individuals of Indian origin could also have been involved (Friedmann 1964, Moreau 1966).

CLAMATOR GLANDARIUS Great Spotted Cuckoo
CLAMATOR LEVAILLANTII Levaillant's Cuckoo Neither species has been encountered at night, although both have been seen occasionally in the netting area at dawn in November (*glandarius* only), December and January. The Great Spotted Cuckoo is Palaearctic as well as Ethiopian but, according to Moreau (1972), Palaearctic birds probably do not cross the equator. Both are known intra-African migrants (Benson *et al.* 1971).

CAPRIMULGIDAE On clear nights no more than the occasional nightjar is usually to be seen. During misty conditions, however, especially when the cloud base is 3-10 m above the ground, scores of nightjars have often been noted concentrated near the lights during November and December. The small *Caprimulgus donaldsoni* is usually prominent. During early and mid-November most of the 'large' nightjars caught have proved to be *C. europaeus*, but towards the end of the year these are outnumbered by various Ethiopian species.

CAPRIMULGUS CLARUS Slender-tailed Nightjar One caught on 23 November 1974 and another on 7 November 1977.

CAPRIMULGUS DONALDSONI Donaldson-Smith's Nightjar Usually prominent, often outnumbering the larger species, October-January, when a maximum of twelve have been ringed on one night. These birds are usually undergoing active wing-moult. Also noted between February and April.

CAPRIMULGUS FRAENATUS Dusky Nightjar At times the predominent larger Ethiopian nightjar; caught on various occasions, sometimes several in a night, between early November and mid-January. Usually in active wing-moult.

CAPRIMULGUS INORNATUS Plain Nightjar At times the predominent large nightjar, outnumbering *europaeus* and *fraenatus*. Records are from early November to mid-December.

CAPRIMULGUS NUBICUS Nubian Nightjar One caught 13 December 1974 and another 14 December 1976 are our only records.

APUS AEQUATORIALIS Mottled Swift One found clinging to a wall in the Lodge during heavy rain on 4 January 1973 is the only night record although the species is sometimes seen feeding round the eastern side of the Lodge in the afternoon. Not known to be a migrant although it wanders over considerable distances.

HALCYON LEUCOCEPHALA Grey-headed Kingfisher A well known intra-African migrant (Moreau 1966) with two recent ringing recoveries from Ethiopia to Kenya (Ash 1976). Three have been caught inside the Lodge (29 November 1975, 29 November 1976, 8 December 1975) while others have been seen just outside at dawn on 14 November 1977, 15 November 1974 and 1 December 1975.

EREMOPTERIX LEUCOTIS Chestnut-backed Sparrow Lark No night records but one caught at 06.30 hrs in the bush near the Lodge on 13 December 1975 suggests arrival in the night. Suspected to exhibit some regular seasonal movement by Benson *et al.* (1971).

MIRAFRA CANTILLANS Singing Bush Lark One juvenile caught and ringed on 6 December 1972. Recorded as a migrant in northern Nigeria (Elgood *et al.* 1973).

MIRAFRA PULPA Friedmann's Bush Lark Two records from the Lodge (12 November 1974 and 2 December 1972) of a very rarely recorded species now known to be a visitor to Tsavo (East) (Lack 1977).

CAMPEPHAGA PHOENICEA FLAVA Black Cuckoo-Shrike No night records but three caught shortly after dawn (5 November, 24 November, and 13 January) may indicate arrival during the night; other examples of this well known migrant (Britton 1973) have been seen near the Lodge.

EMBERIZA POLIOPLEURA Somali Golden-breasted Bunting An adult caught on 18 November 1977 is the only night record although others have been netted in the bushes shortly after dawn. Not a recorded migrant.

MALACONOTUS SULFUREOPECTUS Sulphur-breasted Bush Shrike Never seen at night, but two have been caught in the bushes just south of the Lodge shortly after dawn, on 15 November 1974 and 28 November 1975. Listed as a migrant by Moreau (1966).

MALACONOTUS VIRIDIS QUADRICOLOR Four-coloured Bush Shrike An immature female taken just after dawn in the bushes on 9 December 1973 had probably arrived in the mist during the night. Not recorded as a migrant.

TMETOTHYLACUS TENELLUS Golden Pipit Now known to wander considerably in addition to making local movements (Taylor 1906, Brooke & Irwin 1972). In most years, especially 1971 and 1972/73, several were caught inside the building, even as early in the night as 23.30 hrs, between early November and mid-January. Others have been seen or netted shortly after dawn in the bushes.

BATIS MINOR Black-headed Puff-back Flycatcher Two caught in the bushes soon after dawn on 1 December 1976 with large numbers of Palaearctic migrants.

BATIS PERKEO Pygmy Puff-back Flycatcher One caught in the bush just after dawn on 3 December 1975. Neither of these *Batis* species are known migrants.

TERPSIPHONE VIRIDIS Paradise Flycatcher One outside and one inside the Lodge, respectively, 20 November 1977 and 27 November 1975 are the only night records; in addition, three have been caught and a few others seen in mid and late November just after dawn. A well known migrant.

ACROCEPHALUS BAETICATUS African Reed Warbler No night records, but two caught in the bushes shortly after dawn together with Palaearctic migrants on 17 and 26 December 1973 are likely to have arrived during the night. Both were judged to be *cinnamomeus* and are our only records from the area. The nominate race is a known migrant in southern Africa.

DISCUSSION

Under misty or rainy conditions with little moon, the lights of Ngulia Safari Lodge often attract vast numbers of Palaearctic migrants which settle in the few trees and bushes, on the ground and on the building itself. Compared with these falls, which sometimes exceed 100 000, the number of Ethiopian birds attracted is exceedingly and strikingly small; the reasons for this are unknown but there are three possible explanations: Ngulia has not been visited in all months of the year; it is possible, therefore, that if favourable weather conditions occurred between May and September (when the Lodge has not been visited), Ethiopian species might be encountered in larger numbers. A second explanation is that the numbers of Ethiopian birds moving at night in the Ngulia area is indeed minute. A third possibility is that, if more Ethiopian species are in fact moving at night, they are not attracted to the lights. For example, frequently the Palaearctic Tree Pipits *Anthus trivialis* and, to a lesser extent, Yellow Wagtails *Motacilla flava* are heard calling throughout the night yet the numbers of these two species grounded are interestingly very small indeed. Thus there are specific differences in

the effects the lights have on Palaearctic birds which could well apply to Ethiopian forms as well. The magnitude of the movement of Ethiopian species in the area will only be determined by observations (including radar studies) continuing throughout a whole year.

Elgood *et al.* (1973) define migration as a regular seasonal change in the "centre of gravity" of the distribution of a species. The present evidence suggests that some species encountered are making regular migrations every year, although the timing of these is not usually as precise as it is with the Palaearctic birds. The Harlequin Quail is an example of this type. Other species, such as the Grey-headed Kingfisher and the Paradise Flycatcher, have occurred over the years always within a three-week period, yet in minute numbers. These species in particular are known long-distance migrants - the apparent precision of the timing of the Ngulia records may be real or caused by chance - further observations will help to answer this question.

Some species are likely to be making small-scale wanderings, but it is interesting that they should make these forays at night. One would expect diurnal species, unless undergoing a true migration, to be inactive during the hours of darkness. The fact that many of these birds are often in active wing-moult reinforces the view that theirs is a more or less local movement rather than true migration. Water and waterside birds, even if they are not regarded as migrants, will move from place to place to occupy newly created habitat; when a pool or swamp is formed after rain water birds move in almost immediately; that some of these travel at night is not surprising especially in view of the fact that closely related long-distance migrant species migrate nocturnally.

Most of the Ethiopian birds caught at Ngulia are lean, although the Harlequin Quails are invariably in excellent condition. This lack of visible fat suggests that the birds involved have not been grounded during an extensive migration although it is not impossible that some may have travelled considerable distances before reaching Ngulia.

Little enough is known about the migrations of Ethiopian birds. However, Ngulia observations serve to demonstrate that a number of species, albeit in small numbers, are on the move at night between late October and April. Visits to the Lodge from May to September will, in time, show whether there are other months of the year when Ethiopian migration is more marked.

ACKNOWLEDGEMENTS

We would like to thank E.C. Goss, Warden of Tsavo National Park (West) for allowing us to ring birds at Ngulia. Grateful thanks are due also to the other ringers who have taken part in operations at the Lodge and to the various managers who have made our visits possible and who have helped in so many ways.

REFERENCES

ASH, J.S. 1976. Bird-ringing in Ethiopia report No. 5 1969-1975. *Technical report No. 1, Medical Ecology Division, U.S. Naval Medical Research Unit No. 5*, 1-17.

BACKHURST, G.C. & PEARSON, D.J. 1977. Southward migration at Ngulia, Tsavo, Kenya 1976/77. *Scopus* 1: 12-17.

BENSON, C.W., BROOKE, R.K., DOWSETT, R.J. & IRWIN, M.P.S. 1971. *The birds of Zambia.* London: Collins.

BRITTON, P.L. 1973. Seasonal movements of the black cuckoo-shrikes *Campephaga phoenicea* and *C. flava*, especially in eastern Africa. *Bulletin of the British Ornithologists' Club* 93: 41-48.

---------- & BRITTON, H.A. 1977. An April fall of Palaearctic migrants at Ngulia. *Scopus* 1: 109-111.

BROOKE, R.K. & IRWIN, M.P.S. 1972. A second southern record of the pipit *Tmetothylacus tenellus*. *Bulletin of the British Ornithologists' Club* 92: 91.

ELGOOD, J.H., FRY, C.H. & DOWSETT, R.J. 1973. African migrants in Nigeria. *Ibis* 115: 1-45, 375-411.

FRIEDMANN, H. 1964. Evolutionary trends in the genus *Clamator*. *Smithsonian miscellaneous Collections* 146 (4).

LACK, P.C. 1977. The status of Friedmann's Bush-Lark *Mirafra pulpa*. *Scopus* 1: 34-39.

PEARSON, D.J. & BACKHURST, G.C. 1976. The southward migration of Palaearctic birds over Ngulia, Kenya. *Ibis* 118: 78-105.

TAYLOR, L.E. 1906. Notes on certain birds hitherto unrecorded from the Transvaal. *Journal of the South African Ornithologists' Union* 2: 39-43.

(Received 4 December 1977)

MARABOUS ASSOCIATED WITH VULTURE PARTIES IN EAST AFRICA

D.E. Pomeroy

Vultures have been studied extensively in the Serengeti area (Kruuk 1967, Houston 1974a,b, 1975) but there are few published data on their numbers elsewhere, nor of the numbers of Marabous *Leptoptilos crumeniferus* attending them. Between 1970 and 1977 I observed and counted 21 vulture parties in various parts of East Africa (Table 1). All parties were at carcasses of large mammals, three being cattle and the remainder wild species, ranging from antelopes to elephants. By far the commonest vultures were the two griffons, *Gyps africanus* and *G. rueppellii* which together contributed more than 90 per cent. of the total. The two species were not always separated in the field but, where separate counts were made, the White-backed *G. africanus* was invariably more numerous. Rüppell's only made up a fifth of the *Gyps* vultures in Serengeti (Houston 1975); it is less common in Kenya (cf. Brown 1972, Table 6) and is rare in most parts of Uganda. Lappet-faced *Torgos tracheliotus* and Hooded Vultures *Necrosyrtes monachus* were also frequent at vulture parties, but White-headed *Trigonoceps occipitalis* and Egyptian Vultures *Neophron percnopterus* were uncommon in vulture parties. Twelve of the parties counted numbered 60 to 120 birds; Houston (1974b) showed that the numbers were related to the amount of food available.